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EXAMINER

DARNO, PATRICK A

ART UNIT

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2163

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/627,507	YAMAGAMI, KENJI	
	Examiner	Art Unit	
	Patrick A. Darno	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12062005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-30 are pending in this office action.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 25-30 are rejected under 35 U.S.C. 101 because the claims do not specify that the computer program product be embodied on a computer readable medium.

With respect to claims 25-30 a computer program product that is not embodied on an acceptable computer readable medium is nothing more than a listing or an abstract idea. When the computer program product is recorded on an acceptable computer readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the computer program product to be realized. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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3. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication Number 2005/0193031 issued to Christopher Midgley et al. (hereinafter "Midgley").

Claim 1:

Midgley teaches a method for accessing data contained in a data store comprising:

detecting a user-request to perform an operation on an object stored in a data store (Midgley: paragraph [0067], lines 1; The changes detected were user-requests that changed (edited) a stored file.) and in response thereto communicating a request to the data store to perform the operation and communicating a marker request to the data store (Midgley: paragraph [0067], lines 2-4; The marker request is transmitting of information stored which is then stored within the journal file. The information being transmitted is a result of changes made in the original file. This is referred to as change information in paragraph [0067], line 5), the marker request including information indicative of the operation and the object (Midgley: paragraph [0067], lines 1-6; The transmitted information (marker request) includes information concerning a change in the original file. This change is editing an original file (operation on the original file (object)) and can also include detection of write locks, location of an operating system flush, whether the source file was opened or closed, and other operations (paragraph [0067], lines 15-20). These include, and expand upon, the possible operations cited by the applicant in the applicant's specification paragraph [0102].), wherein the marker request produces a marker journal entry (Midgley: paragraph [0067], lines 17-21; The

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marker journal entry is the data record (Fig. 7, 152a-152e) stored with the journal file (Fig. 7, 150). These data records (marker journal entries) are created from the change information that is transmitted (marker request) in response to the detection of a user change (operation) on the original source file.);

detecting a user-request to retrieve a specified marker journal entry and in response thereto communicating a request to the data store to retrieve the specified marker journal entry (Midgley: paragraph [0071], lines 1-5; The phrase "allow a user to employ time and data information for restoring data to the source data files" indicates the user requests a data record (marker journal entry) because the user chooses to restore a file to a particular point in time, a "safe point". These "safe points" are indicated by data stored in the data record. So when the user requests a "safe point" to restore the document to (by employing a date and time to restore the document to), the user is actually requesting a data record (marker journal entry) and the system then retrieves the data record in order to restore the file to the desired date and time.);

detecting a user-request to perform a recovery operation and in response thereto communicating a recovery request to the data store to restore a data state of the data store, the user-request including information including a target time of the data state (Midgley: paragraph [0071], line 1-5), the target time being based on a time associated with a previously retrieved marker journal entry (Midgley: paragraph [0071], lines 5-14; The data records of Fig.7, 152a-152e are the marker journal entries.).

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Claim 2:

Midgley teaches all the elements of claim 1, as noted above, and Midgley further teaches a method wherein the user-request to retrieve a specified marker journal entry includes information indicating at least one of a target time, an operation, and an object name (Midgley: paragraph [0071], lines 4-5; The user requests the data record (marker journal entry) through the restore process by indicating the date and time (target time).).

Claim 3:

Midgley teaches all the elements of claim 1, as noted above, and Midgley further teaches a method comprising obtaining the previously retrieved marker journal entry based on one of an operation on an object and an object name (Midgley: paragraph [0068], lines 11; The journal file provides data (stored in the data record) based on when changes occur (operation on an object).).

Claim 4:

Midgley teaches all the elements of claim 1, as noted above, and Midgley further teaches a method comprising retrieving a plurality of marker journal entries and presenting one or more of the marker journal entries to a user, wherein the previously retrieved marker journal entry is a user selected one of the marker journal entries (Midgley: paragraph [0071], lines 1-5; The user selects the marker journal entry (data record) through the restore process by specifying the time and date (target time) of the data record (marker journal entry) to be retrieved. Further paragraph [0071], lines 14-20 displays presenting a choice of which data record (marker journal entry) to choose

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(because in order to restore the source file to an earlier point, a data record (marker journal entry) must be selected.).

Claim 5:

Midgley teaches all the elements of claim 1, as noted above, and Midgley further teaches a method wherein the marker journal entries are retrieved periodically over a span of time (Midgley: paragraph [0015], lines 28-31; The replication process involves accessing the data records (marker journal entries) stored in the journals.).

Claim 6:

Midgley teaches a method for processing data on a data store comprising:
receiving user-requests for operations to be performed on a data store (Midgley: paragraph [0067], lines 1; The changes detected were user-requests that changed (edited) a stored file.);

for each user-request, communicating one or more requests to the data store to perform the user-request (Midgley: paragraph [0067], lines 2-4; The marker request is transmitting of information stored which is then stored within the journal file.);

monitoring the user-requests (Midgley: paragraph [0012], lines 2-4; Note "monitoring a journal file and in response to detecting that changes have been recorded". The changes that have been made are the result of user-requests (operations such as editing a copy of the source file, or opening/closing the file.). Since monitoring the journal file involves the monitoring of detected changes (which must be made by the user), the invention of Midgley is in fact monitoring the user-requests also.); and

if a user-request is a predetermined operation, then communicating a marker journal request to the data store in addition to communicating the one or more requests, thereby creating a marker journal entry to mark a time of occurrence of the predetermined operation (Midgley: paragraph [0012], lines 5-8; For this invention dynamic replication is a process that is a predetermined, ongoing operation. While carrying out this operation, the system writes changes to the journal creating data records (Fig. 7, 1523-152a), or marker journal entries. This involves communicating a marker journal request (transmitted information shown in paragraph [0067]) in order to create a new marker journal entry (data records in Fig. 7, 152a-152e).),

wherein the marker journal request includes information representative of the predetermined operation (Midgley: paragraph [0013], lines 5-8 and paragraph [0067], lines 1-6; The first reference states that the "changes" in the file are written to the target data file. This occurs based on reference to the data records (marker journal entry) of Fig. 7, 152a-152e which contain timestamps and other information describing the change that was made. The second reference tells how the change data is transmitted (marker journal request). Further information about the change data can be processed and stored in the data record, which is effectively the creation of a marker journal entry (paragraph [0068], lines 1-4). Here the request (transmitted changed data) includes information representative of the predetermined operation (which is the change data discovered during the dynamic replication operation).),

wherein communicating a marker journal request includes invoking first application program interface (API) program code to transmit the marker journal request

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to the data store (Midgley: paragraph [0067], lines 2-4 and paragraph [0063] and paragraph [0064], lines 1-3; The transmitted information in paragraph [0067] is the marker journal request. The agents disclosed in paragraphs [0063] and [0064] are the APIs. They (the agents) allow for all transmitting and transfer of change data (marker journal requests) to the data store.).

Claim 7:

Midgley teaches all the elements of claim 6, as noted above, and Midgley further teaches a method comprising receiving a user-request to retrieve a marker journal entry (Midgley: paragraph [0067], lines 1; The changes detected were user-requests that changed (edited) a stored file.) and in response thereto communicating a marker retrieval request to the data store, wherein the marker retrieval request includes one or more retrieval criteria (Midgley: paragraph [0071], lines 1-5; The retrieval criteria is the date and the time of the restore point.), wherein the communicating includes invoking second API program code to transmit the marker retrieval request to the data store (Midgley: paragraph [0067], lines 2-4 and paragraph [0063] and paragraph [0064], lines 1-3; The transmitted information in paragraph [0067] is the marker journal request. The agents disclosed in paragraphs [0063] and [0064] are the APIs. They (the agents) allow for all transmitting and transfer of change data (marker journal requests) to the data store.).

Claim 8:

Midgley teaches all the elements of claim 7, as noted above, and Midgley further teaches a method comprising receiving a retrieved marker journal entry from the data

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store and storing the retrieved marker journal entry, wherein the retrieved marker journal entry satisfies the one or more retrieval criteria (Midgley: paragraph [0071], lines 1-5 and lines 10-14; The marker journal entry (data records in Fig. 7, 152a-152e) is retrieved, based on the retrieval criteria (time stamp), and saved when the data from the marker journal entry (data records in Fig. 7, 152a-152e) is used to restore the file to a previous time (again based on the time stamp retrieval criteria). Note the retrieval of data from the back up server is where the marker journal entry (data records in Fig. 7, 152a-152e) is retrieved in order to restore the source file.).

Claim 9:

Midgley teaches all the elements of claim 8, as noted above, and Midgley further teaches a method comprising communicating additional marker retrieval requests to the data store and storing additional retrieved marker journal entries (Midgley: paragraph [0071], line 2; Note “will restore selected target data files”, which means that multiple files are retrieved (because it says files not file), which further means that multiple marker journal requests must be made (one for each target file that is updated).).

Claim 10:

Midgley teaches all the elements of claim 6, as noted above, and Midgley further teaches a method comprising receiving user-information indicative of one or more predetermined operations to be monitored (Midgley: paragraph [0015], lines 31-34; The user selects which files are to be monitored by the predetermined dynamic replication process.).

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Claim 11:

Midgley teaches a method for processing data contained in a data store comprising:

receiving user-requests for operations to be performed on a data store (Midgley: paragraph [0067], lines 1; The changes detected were user-requests that changed (edited) a stored file.);

for each user-request, communicating one or more associated requests to the data store to perform the user-request (Midgley: paragraph [0067], lines 2-4; The marker request is transmitting of information stored which is then stored within the journal file.);

for at least some of the user-requests, communicating a marker journal request to the data store in addition to communicating the one or more associated requests, thereby creating one or more marker journal entries to mark a time of occurrence of some of the user-requests (Midgley: paragraph [0012], lines 5-8; While carrying out the dynamic replication operation, the system writes changes to the journal creating data records (Fig. 7, 1523-152a), or marker journal entries. This involves communicating a marker journal request (transmitted information shown in paragraph [0067]) in order to create a new marker journal entry (data records in Fig. 7, 152a-152e).);

retrieving one or more first marker journal entries from the data store, based on one or more retrieval criteria (Midgley: paragraph [0071], lines 1-5 and lines 10-14; The marker journal entry (data records in Fig. 7, 152a-152e which are retrieved from the

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back up server in order to restore the original file) is retrieved, based on the retrieval criteria (time stamp).);

displaying the first marker journal entries (Midgley: paragraph [0071], lines 14-20; The data records in Fig. 7, 152a-152e (or marker journal entries) are created and stored in the journal file when changes are made to a source file. The data records contain information about the given change. These data records are used in determining point in time to restore a file to. It is clear that in the reference cited here, the user has a choice of different restore points, or safe points (which are recorded in the data records or marker journal entries), from which he/she can choose to use in the restoration process. That choice is made by consulting data records, which store information on the status of the source file at that point in time. In order to consider the data records in the restoration process, the data records must be displayed to the user.);

receiving a user-selected one of the first marker journal entries (Midgley: paragraph [0071], lines 1-5; The user receives one of the marker journal entries (data records in Fig. 7, 152a-152e) through the update of the source file in the restoration process. The selected marker journal entry (data record) is used to aid in restoring the source file to a previous data and time.); and

performing a recovery operation based on a target time associated with the user-selected one of the first marker journal entries (Midgley: paragraph [0071], lines 1-14; See rejections for numerous preceding claims for an explanation of this reference.)

Claim 12:

Midgley teaches all the elements of claim 11, as noted above, and Midgley further teaches a method wherein communicating a marker journal request includes invoking first API program code to communicate with the data store (Midgley: paragraph [0067], lines 2-4 and paragraph [0063] and paragraph [0064], lines 1-3; The transmitted information in paragraph [0067] is the marker journal request. The agents disclosed in paragraphs [0063] and [0064] are the APIs. They (the agents) allow for all transmitting and transfer of change data (marker journal requests) to the data store.).

Claim 13:

Midgley teaches all the elements of claim 12, as noted above, and Midgley further teaches a method wherein retrieving one or more first marker journal entries includes performing one or more invocations of second API program code to communicate with the data store (Midgley: paragraph [0067], lines 2-4 and paragraph [0063] and paragraph [0064], lines 1-3; As explained above, the agents (or APIs) handle all transfer and transmitting background information.).

Claim 14:

Midgley teaches all the elements of claim 13, as noted above, and Midgley further teaches a method wherein performing a recovery operation includes performing one or more invocations of third API program code to communicate with the data store (Midgley: paragraph [0067], lines 2-4 and paragraph [0063] and paragraph [0064], lines 1-3; As explained above, the agents (or APIs) handle all transfer and transmitting background information.).

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Claim 15:

Midgley teaches all the elements of claim 11, as noted above, and Midgley further teaches a method comprising receiving user-information representative of the at least some of the user-requests (Midgley: paragraph [0071], line 1-5; The user requests to restore a source file to a particular point in time and the user receives the data records (marker journal entries) required to restore the file to the given time and date through the restoration process.).

Claim 16:

Midgley teaches all the elements of claim 15, as noted above, and Midgley further teaches a method wherein the user-information includes one or more of an operation to be performed in the data store and an object contained in the data store (Midgley: paragraph [0071], line 1-5; The operation to be performed is the restoration of a source file to an earlier date and time. The object being restored is the source file and it resides in the data store.).

Claim 17:

Midgley teaches a method for processing data in a data store comprising:
producing one or more snapshots of a data store (Midgley: paragraph [0011], lines 1-17);

detecting write requests directed to the data store and in response thereto producing journal entries corresponding to the write requests (Midgley: paragraph [0067], lines 1-4), wherein the journal entries can be applied to one of the snapshots to

recreate one or more data states of the data store (Midgley: paragraph [0067], lines 4-9; Further note paragraphs [0012]-[0013].);

detecting marker requests and in response thereto producing corresponding marker journal entries, wherein the journal entries and the marker journal entries are ordered according to the time of their respective write requests and marker requests (Midgley: paragraph [0066], lines 1-13 and Fig. 7; Note that the journal file 150 is made containing all document change information. The journal file contains all write requests (paragraph [0066], lines 8-10) and marker requests which are stored inside the data records 152a-152e of the journal file 150.);

detecting a request to retrieve a specified marker journal entry and in response thereto accessing the specified marker journal entry (Midgley: paragraph [0071], lines 4-5; This allows the user to specify by time and date a particular marker journal entry as specified by a particular date and time. For further explanation of this reference, see previous claim rejections above.); and

detecting a request to perform a recovery operation the request including a target time based on a time associated with a previously retrieved marker journal entry (Midgley: paragraph [0071], lines 1-5; For explanation of this reference see previous claim rejections for which it was used.).

Claim 18:

Midgley teaches all the elements of claim 17, as noted above, and Midgley further teaches a method comprising assigning a sequence number to each journal entry and to the marker journal entry in the order in which the entries are produced (Midgley: paragraph [0064], lines 6-10).

Claim 19:

Midgley teaches all the elements of claim 17, as noted above, and Midgley further teaches a method wherein the marker request is detected as part of performing a predetermined operation on an object stored on the data store (Midgley: paragraph [0012], lines 5-8; For this invention dynamic replication is a process that is a predetermined, ongoing operation. While carrying out this operation, the system writes changes to the journal, which creates data records (Fig. 7, 1523-152a), or marker journal entries. This involves communicating a marker journal request (transmitted information shown in paragraph [0067]) in order to create a new marker journal entry (data record in Fig. 7, 152a-152e).).

Claim 20:

Midgley teaches a computer apparatus for processing data contained in a data store comprising:

a data processing component (Midgley: paragraph [0067], lines 4-6; The transaction processor is the data processing component.);

a communication component configured to communicate between a host device and a data store (Midgley: paragraph [0063]-[0064]; The agents are equivalent to the

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APIs of the applicant's claimed invention and they handle all transfer and transmitted of data (communication) between the host device and the data store.); and

computer program code configured to operate one or more of the data processing component or the communication component (Midgley: paragraph [0119], lines 4-10) to perform steps of:

communicating marker journal requests to the data store, to create a plurality of marker journals (Midgley: paragraph [0067], lines 2-4; The marker request is transmitting of information stored which is then stored within the journal file. The information being transmitted is a result of changes made in the original file. This is referred to as change information in paragraph [0067], line 5);

communicating marker retrieval requests to the data store, to retrieve one or more of the marker journal entries (Midgley: paragraph [0071], lines 4-5; This allows the user to specify by time and date a particular marker journal entry as specified by a particular date and time. For further explanation of this reference, see previous claim rejections above.); and

communicating a data recovery request to the data store, to perform a recovery operation to recover a data state in the data store (Midgley: paragraph [0071], lines 1-14; See rejections for numerous preceding claims for an explanation of this reference.);

wherein the computer program code is configured as an application programming interface (API) to allow an application program to perform one or

more of the steps of communicating (Midgley: paragraphs [0063]-[0064]; The agents are the APIs that allow all communications from the application program level to the data store. Background communication of this sort between computer components is done solely with the use of agents. Furthermore, an API is simply a form of an agent because they handle communication between application components in the background operation of a computer system.).

Claim 21:

Midgley teaches all the elements of claim 20, as noted above, and Midgley further teaches an apparatus wherein each marker journal request includes information indicative of one of an object contained in the data store and an operation to be performed on an object contained in the data store (Midgley: paragraph [0071], line 1-5; The operation to be performed is the restoration of a source file to an earlier date and time. The object being restored is the source file and it resides in the data store.).

Claim 22:

Midgley teaches all the elements of claim 20, as noted above, and Midgley further teaches an apparatus wherein the marker retrieval requests are based on information associated with the marker journal entries (Midgley: paragraph [0071], lines 1-5 and lines 9-14; The marker journal entry (data records in Fig. 7, 152a-152e) is retrieved, based on the information (time stamp) associated with the marker journal entry (data record).).

Claim 23:

Midgley teaches all the elements of claim 20, as noted above, and Midgley further teaches an apparatus wherein the data recovery request includes a target time indicative of the data state to be recovered (Midgley: paragraph [0071], lines 1-5 and lines 9-14).

Claim 24:

Midgley teaches all the elements of claim 23, as noted above, and Midgley further teaches an apparatus wherein the target time is based on a time associated with a previously retrieved marker journal entry (Midgley: paragraph [0071], lines 1-5 and lines 9-14; The file is then restored by finding a journal that has a marker journal entry (data record) that is associated with the user's requested file and further has a marker journal entry associated with the user's requested target time and date.).

Claim 25:

Midgley teaches a computer program product for processing data on a data store comprising:

a storage component having stored therein computer program code (Midgley: paragraph [0119], lines 1-10);

the computer program code comprising an application program interface (API), the API comprising (Midgley: paragraphs [0063]-[0064]; The agents are the APIs.):

a first API component configured to allow execution of first program code, the first program code configured to operate a data processor to communicate a marker journal request to a data store to create a marker journal entry (Midgley:

paragraph [0067], lines 2-4; The marker request is transmitting of information stored which is then stored within the journal file. The information being transmitted is a result of changes made in the original file. This is referred to as change information in paragraph [0067], line 5), the marker journal request including marker information indicative of one or more of an object contained in the data store or an operation on an object contained in the data store (Midgley: paragraph [0067], lines 1-6; The transmitted information (marker request) includes information concerning a change in the original file. This change is editing an original file (operation on the original file (object)) and can also include detection of write locks, location of an operating system flush, whether the source file was opened or closed, and other operations (paragraph [0067], lines 15-20). These include, and expand upon, the possible operations cited by the applicant in the applicant's specification paragraph [0102]), the marker information being associated with the marker journal entry (Midgley: paragraph [0067], lines 17-21; The marker journal entry is the data record (Fig. 7, 152a-152e) stored with the journal file (Fig. 7, 150). These data records (marker journal entries) are created from the change information that is transmitted (marker request) in response to the detection of a user change (operation) on the original source file.);

a second API component configured to allow execution of second program code, the second program code configured to operate a data processor to communicate a marker retrieval request to the data store to retrieve at least one marker journal entry (Midgley: paragraph [0071], lines 1-5; See explanation of

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this reference given above in rejection of claim 1.), the marker retrieval request including retrieval criteria based on the marker information (Midgley: paragraph [0071], lines 1-5; The retrieval criteria is the date and the time of the restore point.); and

a third API component configured to operate a data processor to allow execution of third program code, the third program code configured to communicate a recovery request to the data stored to recover a data state of the data store (Midgley: paragraph [0071], lines 1-14; See rejections for numerous preceding claims for an explanation of this reference.).

Claim 26:

Midgley teaches all the elements of claim 25, as noted above, and Midgley further teaches a computer program product wherein the recovery request includes a target time that is based on a time associated with a previously retrieved marker journal entry (Midgley: paragraph [0071], lines 1-5 and lines 9-14; The file is then restored by finding a journal that has a marker journal entry (data record) that is associated with the user's requested file and further has a marker journal entry associated with the user's requested target time and date.).

Claim 27:

Midgley teaches all the elements of claim 25, as noted above, and Midgley further teaches a computer program product wherein the API further comprises a fourth API component configured to operate a data processor to allow execution of fourth program code, the fourth program code configured to monitor one or more operations

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on one or more objects contained in the data store (Midgley: paragraph [0015], lines 31-34; The user selects which files are to be monitored by the predetermined dynamic replication process.).

Claim 28:

Midgley teaches all the elements of claim 27, as noted above, and Midgley further teaches a computer program product wherein the API further comprises a fifth API component configured to operate a data processor to allow execution of fifth program code, the fifth program code configured to communicate a marker retrieval request to the data store to retrieve a marker journal entry (Midgley: paragraph [0071], lines 1-5; See rejection of claim 1 for an explanation of this reference.).

Claim 29:

Midgley teaches all the elements of claim 28, as noted above, and Midgley further teaches a computer program product wherein the fifth program code is further configured to operate a data processor to communicate a plurality of marker retrieval requests to retrieve a plurality of retrieved marker journal entries, wherein the recovery request includes a target time that is based on a time associated with one of the retrieved marker journal entries (Midgley: paragraph [0071], lines 1-5 and lines 9-14).

Claim 30:

Midgley teaches all the elements of claim 27, as noted above, and Midgley further teaches a computer program product wherein the API further comprises:

a fifth API component configured to operate a data processor to allow execution of fifth program code, the fifth program code configured to communicate a plurality of

marker retrieval requests to the data store to retrieve a plurality of marker journal entries (Midgley: paragraph [0071], line 2; Note “will restore selected target data filess”, which means that multiple files are retrieved (because it says files not file), which further means that multiple marker journal requests must be made (one for each target file that is updated).); and

a sixth API component configured to operate a data processor to allow execution of sixth program code, the sixth program code configured to display the plurality of marker journal entries, wherein the recovery request includes a target time that is based on a time associated with one of the retrieved marker journal entries (Midgley: paragraph [0071], lines 1-5 and lines 9-14).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-0788. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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you have questions on access to the Private PAIR system, contact the Electronic
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PD

 Patrick A. Darno
Examiner
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